

LESSON 4A—NARRATIVE: WHAT PLANTS DID ANCIENT PEOPLE USE?

Roots, berries, bulbs, and other parts of plants provided food and medicine for ancient people.

When hunger strikes, you simply open the refrigerator door, or cupboard, and take out food to eat. Your parents prepare meals from food they buy at the grocery store. Some Montana families choose to grow gardens for fresh produce, or they hunt game animals. Maybe your family drives to a local restaurant for a meal. Ancient Montanans did not have all the choices we have today. They did not rely on grocery stores or restaurants for **subsistence**. They depended on plant foods they gathered and animals they hunted in the wild.

Prehistoric Montanans did not plant gardens or raise animals for food. But many ancient people living in other parts of the New World did. By the time Europeans arrived in the New World, most Indians living in the east and southwest were **agriculturalists** who cultivated plants, including over three hundred different food crops. Foods introduced to the world by American Indians include potatoes, tomatoes, squash, beans, corn, peanuts, cashews, blueberries, and maple syrup. The plant foods first domesticated by Indians feed much of the world today.

Prehistoric people in Montana were **hunters and gatherers**. They were not agriculturists. They were also **nomadic**, moving as the seasons changed to hunt and gather wild food in different places. A variety of plants grew through the warm seasons.

Animals moved as plants were available for their subsistence. People lived along the warmer river bottoms during the cold weather. They traveled to the foothills and mountains during warm weather to hunt animals and gather roots, bulbs, and berries. This was their **yearly subsistence round**.

Traveling to gather plants and hunt animals was their way of life. Living a nomadic lifestyle meant traveling light and carrying few possessions. For the majority of prehistoric time, people did not have horses to transport their personal items. Dogs hauled belongings for ancient people on a **travois**. They carried only the necessities. They could not carry a great supply of food. Gathering plants and hunting animals was a constant and necessary activity of all prehistoric groups in Montana.

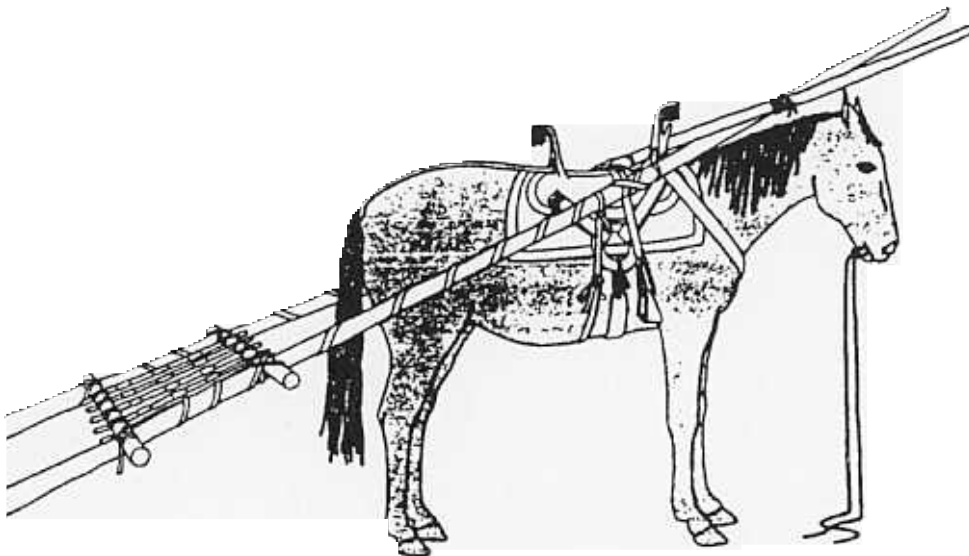
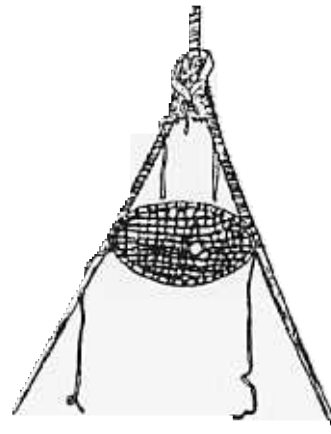
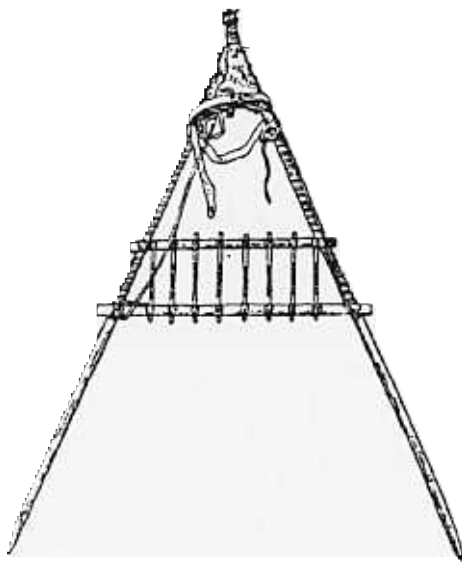
All people need food and water to survive. Each person needs a certain number of **calories**, or food energy, to stay alive. The number of calories each person needs varies depending on a variety of factors. A person's age, body size, and activity level create the need for different amounts of calories. Young people require more calories than an older person does, as young bodies are growing. People who live in cold climates also require more calories than those living in warm areas. In Montana's rigorous climate, people needed many calories of food to survive. Prehistoric groups did not have the technology to store large

quantities of food. When food—particularly bison—was plentiful, times were good. But each year in late winter and early spring, prehistoric groups often went hungry. They might eat a meal every couple of days. A meal might be a little camas flour mixed with water and pieces of boiled bison hide. Stored plant food often got them through these tough times.

In ancient times, the kinds and availability of plants varied from

eastern to western Montana, from lowlands to high mountains, and from spring through summer to fall. Many plants that grew in Montana during prehistoric times, such as camas and bitterroot, are similar to the same plants today. People used the plants that grew in their territory because they knew where and when to find them. Spring and summer were seasons to gather plant roots and bulbs. Late summer and autumn were

Montana's ancient people used the travois to move their food, shelter, and other belongings from place to place. Before Euro-Americans introduced horses, the travois was harnessed to dogs. *Courtesy Kansas State Historical Society.*



times to harvest nuts and berries.

People did not just use plants for food. Some plants were of great medicinal value. **Medicines** made from plants cured ills and healed wounds. In fact, the soft drink, Dr. Pepper, got its start as a traditional medicinal tonic made from peppery-tasting roots and bark. Prehistoric people placed purple coneflower on rattlesnake bites and other venomous stings. They used the leaves of the balsamroot plant as a **poultice**, a moist covering, for burns, cuts, and bruises. Tea, made from the stem or bark root of a wild rose, helped cure stomach problems. They used yarrow on cuts to help stop bleeding. They also boiled yarrow and used it to wash and disinfect wounds. The Flathead Indians used the huckleberry plant for heart ailments and arthritis.

Plants could also help people manufacture useful items. Prehistoric people used milkweed and juniper to make **cordage**, a braided form of ancient string. A nine-thousand-year-old net made of juniper bark cordage was found in Mummy Cave near the Montana/Wyoming border. The net was used to trap animals.

Plants were very important to ancient people. It is estimated that over three hundred different species of plants were used by the prehistoric people of Montana. However, until recently, archaeologists often ignored this important facet of prehistoric life. This is because direct evidence of plant gathering and processing has been difficult to find in Montana archaeological sites, where plant remains often do not survive over time. Now, new methods of analysis

have enabled archaeologists to better study this activity. Before this new knowledge became available, oral histories and early written descriptions of plants used by historic Indian tribes helped archaeologists understand how prehistoric people probably used plants. And today, many tribal members still gather plants in special areas. They process and use them in the ancient way as food or medicine. The study of modern traditional plant use is called **ethnobotany**.

Roots were a primary plant food source for prehistoric people. Root crops such as camas, bitterroot, biscuitroot, and Indian breadroot provided them with nutrients, minerals, and vitamins, as well as **carbohydrates** and **protein**. Root harvesting was women's and girls' work among the Salish, Flathead, Blackfeet, and Shoshone Indians. They used a special **digging stick**, made of wood and/or antler. They harvested the roots at certain times in spring when they were most edible. Bitterroot was harvested before it flowered; camas was harvested after it flowered. Through knowledge passed on by elders, ancient people knew when roots were at their prime. This traditional knowledge continues to be passed on today.

Once a root was dug, it could be **processed**, or prepared, in many different ways. Some roots were dried in the sun by spreading them out on animal hides. These were saved for winter meals. People also boiled and steamed roots, or roasted them in pits dug into the ground. Roots could be eaten plain, mixed with berries, or added to stews as a thickener.

Camas, a very popular root crop among the prehistoric people of western Montana, was stored whole, squeezed into little cakes, or mashed and formed into round loaves. Camas was also boiled to make a sweet-tasting drink much like coffee or tea. Before sugar was introduced, dried camas was the primary sweetening agent used by many Indian groups in the Pacific Northwest.

Often prehistoric people dried the roots and then mashed and ground them with a stone **mano** and **metate** to create flour. This flour was then used in cooking. A metate is a large flat stone with an indented area to place roots. The mano is a smaller hand-held stone used to mash and grind the root back and forth within the metate's indented area until the root is finely ground. Prehistoric manos and metates show the wear of many years of use.

Berries and fruit were a staple in many prehistoric diets, especially during the fall. The people harvested serviceberry, huckleberry, chokecherry, gooseberry, currant, and buffaloberry as they ripened in late summer or early autumn. The berries harvested after the first frost are considered the sweetest by many today. Berries and fruit were eaten fresh, dried in the sun on hides, or ground with a mano and metate. Ground berries and fruit were mixed with fat and meat, then formed into cakes and loaves. Lewis and Clark wrote in their journals that they saw Indian women making serviceberry cakes that weighed fifteen pounds! Prehistoric people dried a mixture of berries and/or fruit, meat, and fat to create **pemmican**. Pemmican could be

stored to eat during the winter months or packed along on journeys.

Other parts of edible plants these early people consumed included the seeds of yucca, pigweed, wild sunflower, and wild rye and the nuts of limber and whitebark pine. They also ate the leaves and fruit of the prickly pear cactus. Prehistoric gatherers collected the bulbs of sego lily and wild onion, and in the spring, they ate the early shoots of the arrowleaf plant like celery.

Many of the plants you see when you hike through the prairies or mountains provided food and medicines for ancient people. Plants were extremely important for survival, especially when prehistoric hunters could find no animals to kill. Today many American Indians, and others, use plants as the ancient people did. Tribes such as the Blackfeet, Salish, and Kootenai Indians still use traditional huckleberry and bitterroot gathering grounds each year.

It is always important to identify plants before you eat or use them. Some plants like the water hemlock are deadly poisonous, so please exercise caution.

LESSON 4A—VOCABULARY: WHAT PLANTS DID ANCIENT PEOPLE USE?

agriculturalist _____

calories _____

carbohydrates _____

cordage _____

digging stick _____

ethnobotany _____

hunters and gatherers _____

mano _____

medicines _____

metate _____

nomadic _____

pemmican _____

poultice _____

processed _____

protein _____

subsistence _____

travois _____

yearly subsistence round _____

LESSON 4A—ARCH ACTIVITY: SURVIVING THE WILDS

Grades: 3–8

Content Area: science, history, and writing

Who: whole class and individual

Materials:

paper and pencils

Arch Journal

OBJECTIVE AND OUTCOME

- Students will gain an understanding of how ancient people used the natural environment as their grocery store.
- Students will identify plants and animals in their local area that could be used for food and clothing.
- Students will create a chart comparing subsistence elements of our culture with those in prehistory.

ACTIVITY

1. Tell students to imagine that one day they wake in the wild next to a river. After they find themselves there, they look around and find no other people. There are no roads, stores, buildings, or other sign of civilization. All they have is a book for identifying plants. In order to survive, they will need food, tools, and shelter. They must rely on nature to provide for their needs.

2. Discuss what their needs would be and how they would do things. List all ideas on blackboard.

~ Ask students what their first concerns would be?

~ Ask students about what animals and plants would be available for them to eat? How would they gather plants? How would they hunt?

~ What tools would they need for hunting and plant gathering?

~ How would they cook food? What would they need to cook it?

~ If they need to store food, how would they do it?

~ How would the river be important for their survival?

~ Would it be easier to survive in a desert than in Montana? What advantages would a desert environment offer?

~ How much time in a day would survival activities take? When would there be play time?

~ In summary, what special skills would students need to develop to survive in the wild and what would their lives be like?

3. Instruct each student to make a chart in their Arch Journal with six comparisons of our food today with that of prehistoric people.

EXTENSIONS

3–5:

- Research vocabulary.

See: Lesson 4A—Vocabulary.

6–8:

- Challenge students to read about the domestication of plants and find out which domesticated plants came from which continents. Examine the world map and show where plants came from.